Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Series CLS-100, CLSTA-100 & CLS-125

Locksmith® Residential Water Softening Systems

Connection Size: 1 & 1.25"
Flow Rates: Up to 27 gpm (102 lpm)

Watts Locksmith® CLS Series water softening systems are high-efficiency, cation exchange softeners designed for residential point-of-entry applications. These pre-engineered systems provide capacities from maximum of 30,000 to 210,000 grains of hardness removal with flow rates up to 27 gpm (102 lpm). For applications requiring continuous softened water, the CLSTA twin alternating configuration delivers uninterrupted service.

All systems feature meter-initiated, demand-based regeneration with fully automatic cycles requiring no manual operation. The Watts Locksmith controller is a proprietary, advanced control platform capable of operating 1" and 1.25" simplex and twin alternating softeners, as well as controlling external devices for flexible system configuration.

The CLS Series soften water by replacing scale-forming calcium and magnesium ions with sodium ions, protecting downstream equipment and improving water quality. These systems are ideal for residential applications for the flow rates and capacities necessary for appliances in the home.

Softened water protects internal plumbing, water heaters and appliances by preventing scale formation, while reducing mineral residue on fixtures and surfaces. By removing calcium and magnesium, it improves soap and detergent performance, allowing products to lather more effectively and reducing usage by 30–50%. Detergents dissolve fully without these minerals, preventing sticky soap scum buildup. The result is cleaner surfaces, softer fabrics, brighter colors, and extended appliance life.



CLS-100 & CLS-125



CLSTA-100

⚠ WARNING

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS®

Features and Benefits

- Complete Whole House water treatment system
- Locksmith Controller offering improved functionality of a basic softener using advanced computer programming to increase efficiency, save salt and water.
- Low Salt Alarm Warning
- Programmable Service Company Contact Screen
- Softened water provides a wide variety of benefits including preventing scale build up, longer appliance lifespans, reduced energy usage, cleaner dishes/fixtures, increased soap efficiency, and improved skin and hair health
- Models for capacities up to maximum of 120,000 grains per tank
- Full flow bypass valve included

Operating Parameters

pH	6 to 10
Hardness (maximum)	Depends on customer's acceptable hardness leakage level
Free Chlorine (maximum)	1mg/L
Iron (maximum)	1mg/L
Oil and H2S	None Allowed
Turbidity	Less than 5.0 NTU
Total Dissolved Solids	Must be below 750mg/L for the softener to produce less than 1 grain per gallon soft water
Water Pressure*	25psi to 125psi (171 kPa to 8.6 bar)
Temperature	40 - 110°F (4 - 43°C)
Operating Ambient Temperature	34° to 120°F (1° to 52°C)
Maximum Humidity	75%
Power Supply Input Voltage	100-120 VAC
Power Supply Input Frequency	50/60 Hz
Power Supply Output Voltage	15 VDC
Power Supply Output Current	500 mA (per control valve)
Maximum Altitude	6562 feet above sea level

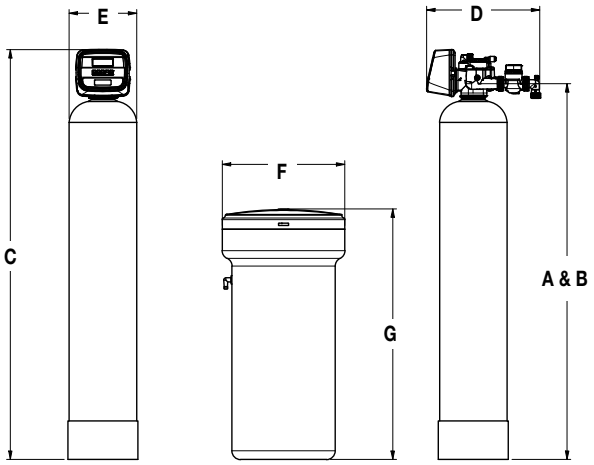
Water known to have heavy loads of dirt and debris may require pre-filtration prior to the water softening system.

For all other guideline information please contact your Watts representative.

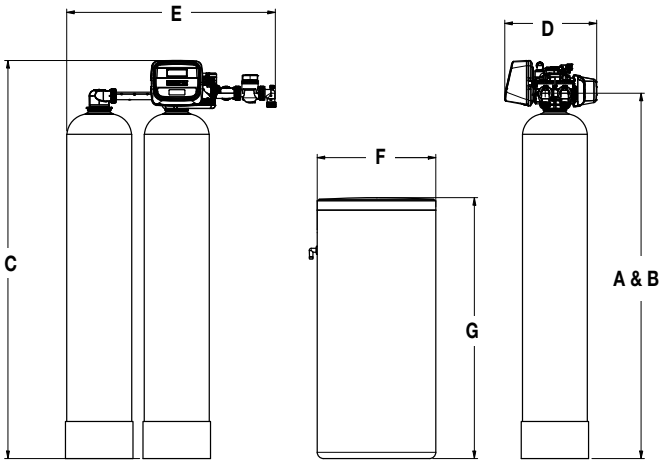
*It is established that when daytime water pressure exceeds 80psi (5.5 bar), the maximum pressure rating of 125psi (8.6bar) can be exceeded. A pressure regulator is required on this system or warranty is voided.

Dimensions

CLS-100 & CLS-125



CLSTA-100



Dimensions & Weights

Series CLS-100

Call customer service if you need assistance with technical details.

MODEL NO.	DIMENSIONS														WEIGHTS	
	A		B		C		D		E		F		G			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
M3011-L10SM	50 1/2	1283	50 1/2	1283	55 1/2	1410	16 3/4	425	9 1/2	241	18 1/2	470	37 1/2	953	110	50
M3013-L10SM	56 1/2	1435	56 1/2	1435	61 1/2	1562	16 3/4	425	10 1/2	267	18 1/2	470	37 1/2	953	130	59
M3015-L10SM	55	1397	55	1397	60	1524	16 3/4	425	12 1/2	318	18 1/2	470	37 1/2	953	190	86
M3017-L10SM	67	1702	67	1702	72 1/4	1835	16 3/4	425	14 1/2	368	18 1/2	470	37 1/2	953	270	122

Series CLSTA-100

MODEL NO.	DIMENSIONS														WEIGHTS	
	A		B		C		D		E		F		G			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
M2058-L10T	50 3/4	1289	50 3/4	1289	56	1422	13 3/4	349	32	813	18 1/2	470	40 3/4	1035	230	104
M2059-L10T	57	1448	57	1448	62	1575	13 3/4	349	32 1/2	826	18 1/2	470	40 3/4	1035	290	132
M2060-L10T	55 1/2	1410	55 1/2	1410	60 1/2	1537	13 3/4	349	37 1/2	953	18 1/2	470	40 3/4	1035	420	191
M2063-L10T	56 1/4	1429	56 1/4	1429	61 1/4	1556	13 3/4	349	40 1/4	1022	18 1/2	470	40 3/4	1035	460	209
M2066-L10T	68 1/4	1734	68 1/4	1734	73 1/4	1861	14 1/2	368	43	1092	18 1/2	470	40 3/4	1035	500	227
M2069-L10T	68 3/4	1746	68 3/4	1746	73 3/4	1873	16 3/4	425	46	1168	18 1/2	470	40 3/4	1035	650	295
M2070-L10T	71	1803	71	1803	76	1930	19 1/4	489	49 1/4	1251	25 1/2	648	44	1118	890	404
M2072-L10T	70 1/4	1784	70 1/4	1784	75 1/4	1911	22 1/4	565	53 3/4	1365	25 1/2	648	52 1/2	1334	1160	526

Series CLS-125

MODEL NO.	DIMENSIONS														WEIGHTS	
	A		B		C		D		E		F		G			
	in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lb*	*kg*
M4032B-L125	50 1/2	1283	50 1/2	1283	55 1/2	1410	16 3/4	425	9 1/2	241	18 1/2	470	40 3/4	1035	110	50
M4036B-L125	56 1/2	1435	56 1/2	1435	61 1/2	1562	16 3/4	425	10 1/2	267	18 1/2	470	40 3/4	1035	130	59
M4040B-L125	55	1397	55	1397	60	1524	16 3/4	425	12 1/2	318	18 1/2	470	40 3/4	1035	190	86
M4042B-L125	67	1702	67	1702	72 1/4	1835	16 3/4	425	14 1/2	368	18 1/2	470	40 3/4	1035	270	122
M4046B-L125	68 1/4	1734	68 1/4	1734	73 1/2	1867	18	457	16 3/4	425	18 1/2	470	40 3/4	1035	350	159

Specifications

MODEL NO.	ORDERING CODE	CAPACITY (MAX.)	PIPE SIZE (IN.)	MINERAL TANK		BRINE TANK		FLOW RATE & PRESSURE			SHIP WT. (LBS.)
				TANK SIZE	RESIN FT3	TANK SIZE	SALT FILL (LBS.)	SERVICE (GPM)	DROP (PSI)	BKW (GPM)	
CLS-100 Systems											
M3011-L10SM	68112309	30,000	1	9x48	1	18x36	350	9-12	15-25	2.2	110
M3013-L10SM	68112310	45,000	1	10x54	1.5	18x36	350	12-16	15-25	2.7	130
M3015-L10SM	68112311	60,000	1	12x52	2	18x36	350	15-20	15-25	4.2	190
M3017-L10SM	68112312	90,000	1	14x65	3	18x36	350	18-23	15-25	5.3	270
CLSTA-100 Systems											
M2058-L10T	68112333	30,000	1	9x48	1	18x40	400	13-19	15-25	2.2	230
M2059-L10T	68112334	45,000	1	10x54	1.5	18x40	400	14-21	15-25	2.7	290
M2060-L10T	68112335	60,000	1	12x52	2	18x40	400	15-21	15-25	2.7	420
M2063-L10T	68112336	75,000	1	13x54	2.5	18x40	400	15-21	15-25	4.2	460
M2066-L10T	68112337	90,000	1	14x65	3	18x40	400	17-22	15-25	5.3	500
M2069-L10T	68112338	120,000	1	16x65	4	18x40	400	17-24	15-25	7.5	650
M2070-L10T	68112339	150,000	1	18x65	5	24x41	600	18-25	15-25	9	890
M2072-L10T	68112340	210,000	1	21x62	7	24x50	800	20-27	15-25	11	1160
CLS-125 Systems											
M4032B-L125	68112341	30,000	1.25 / 1.5	9x48	1	18x40	400	9-15	15-25	2.2	110
M4036B-L125	68112342	45,000	1.25 / 1.5	10x54	1.5	18x40	400	10-15	15-25	2.7	130
M4040B-L125	68112343	60,000	1.25 / 1.5	12x52	2	18x40	400	15-20	15-25	4.2	190
M4042B-L125	68112344	90,000	1.25 / 1.5	14x65	3	18x40	400	18-23	15-25	5.3	270
M4046B-L125	68112345	120,000	1.25 / 1.5	16x65	4	18x40	400	19-25	15-25	7.5	350

NOTICE

Capacities are based on resin manufacturer's data and are dependent upon influent water TDS, temperature, bed depth, and flow rates. Feed water must be free of oil and color. Pipe size, tank size, and space requirements are in inches. Capacities and flow rates expressed above are per tank. Flow rates listed at 25psi drops are for intermittent peak flow rates and are not to be used as continuous flows.

NOTICE

Flow rates listed above are based on pressure drop only. Selecting a system based on pressure drop alone does not guarantee that the system will proved adequately softened water. System selection should be based on resin quantity, capacity required, feed water analysis, and application requirements.

Ordering Information for 1” Simplex (CLS-100) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT LBS
M3011-L10SM	68112309	1 Cubic Foot 1" Simplex Softener with Flow Meter	19" X 34" X 56"	110
M3013-L10SM	68112310	1.5 Cubic Foot 1" Simplex Softener with Flow Meter	19" X 35" X 62"	130
M3015-L10SM	68112311	2 Cubic Foot 1" Simplex Softener with Flow Meter	19" X 37" X 60"	190
M3017-L10SM	68112312	3 Cubic Foot 1" Simplex Softener with Flow Meter	19" X 39" X 72"	270

Ordering Information for 1” Twin Alternating (CLSTA-100) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT LBS
M2058-L10T	68112333	1 Cubic Foot 1" Twin Alternating Softener with Flow Meter	19" X 57" X 56"	230
M2059-L10T	68112334	1.5 Cubic Foot 1" Twin Alternating Softener with Flow Meter	19" X 57" X 62"	290
M2060-L10T	68112335	2 Cubic Foot 1" Twin Alternating Softener with Flow Meter	19" X 62" X 61"	420
M2063-L10T	68112336	2.5 Cubic Foot 1" Twin Alternating Softener with Flow Meter	19" X 65" X 61"	460
M2066-L10T	68112337	3 Cubic Foot 1" Twin Alternating Softener with Flow Meter	19" X 68" X 73"	500
M2069-L10T	68112338	4 Cubic Foot 1" Twin Alternating Softener with Flow Meter	19" X 71" X 74"	650
M2070-L10T	68112339	5 Cubic Foot 1" Twin Alternating Softener with Flow Meter	26" X 81" X 76"	890
M2072-L10T	68112340	7 Cubic Foot 1" Twin Alternating Softener with Flow Meter	26" X 85" X 75"	1160

Ordering Information for 1.25” Simplex (CLS-125) Softeners

MODEL NO.	ORDERING CODES	DESCRIPTION	SPACE REQUIRED D X W X H	SHIPPING WEIGHT LBS
M4032B-L125	68112341	1 Cubic Foot 1 1/4" Simplex Softener with Flow Meter	19" X 34" X 56"	110
M4036B-L125	68112342	1.5 Cubic Foot 1 1/4" Simplex Softener with Flow Meter	19" X 35" X 62"	130
M4040B-L125	68112343	2 Cubic Foot 1 1/4" Simplex Softener with Flow Meter	19" X 37" X 60"	190
M4042B-L125	68112344	3 Cubic Foot 1 1/4" Simplex Softener with Flow Meter	19" X 39" X 73"	270
M4046B-L125	68112345	4 Cubic Foot 1 1/4" Simplex Softener with Flow Meter	19" X 41" X 74"	350

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